

Notes on the Systematy of Solomon Islands' Plants and some of their New Guinea Relatives, VIII and IX

By

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VIII Apocynaceae

A. Allowoodsonia Markgraf

Allowoodsonia*whitmorei Mgf.n.gen. et sp.

Arbor 6–12 m. alta, radicibus tabularibus instructa, cortice fusco, laevi oblecta. Folia opposita, chartacea, glabra, breviter (8 mm.) petiolata, elliptica, apice breviter caudata, 13–18 cm. longa, 5–7 cm. lata; nervi secundarii arcuati, 6–7 in utroque latere. Inflorescentiae axillares, glabrae, pauciflorae, pedunculo 1–1.5 mm. longo, simplici, in parte superiore bracteis minimis ornato, a basi ad apicem flore altero post alterum florentes. Pedicellus gracilis, 1.5 cm. longus, 0.5 mm. latus. Calycis lobi 5, ovato-lanceolati, usque ad basin liberi, 4 mm. longi, 2 mm. lati, in marginibus brevissime ciliati, intus in latere tecto uniglandulosi. Corollae albae tubus extus glaber, 10–12 mm. longus, 3 mm. latus, a medio ad apicem ad 4 mm. ampliatus, intus longepilosus, fauce non calloso; lobi 5 sinistrorsum tegentes, lanceolati, paulum obliqui, margine tecto magis arcuato et basi subauriculato, 15 mm. longi, 4 mm. lati, extus glabri, intus longe-pilosi. Stamina 5, medio tubo inserta, filamenta brevissima, antherae sagittiformes, capiti stigmatico agglutinatae, thecae exteriores 4 mm., interiores 1 mm. longae, connectivum in apiculum pilosum, 0.5 mm. longum, faucem attingens prolongatum. Caput stigmaticum subglobosum, quinquangulare, apice in appendices 2 erectas, brevissimas, pilosas attenuatum; stylus 5 mm. longus; ovarium glabrum, biloculare, apocarpum, 1 mm. altum, oblongum, disco anulari quinquelobo circumdatum, ovula in utroque carpello ad 8. Fructus apocarpus, mericarpia horizontaliter divergentia, cylindrica acuminata, hinc inde inflata, glabra, coriacea, complura semina gerentia, 12 mm. crassa, usque ad 28 cm. longa. Semina applanata, oblique oblongo-lanceolata, 5 cm. longa, 1 cm. lata, glabra, non comata. Embryo rectus, radícula 6 mm. longa, 1 mm. lata, cotyledones cordato-lanceolati, 34 mm. longi, 8 mm. lati.

SOLOMONS: Guadalcanal: BSIP 3313, NE at Rere R., c. 3 miles inland, primary forest in valley bottom. Tree H. 20 ft., G. 1 ft. Bole straight, bark grey, smooth. Slash: wood soft, white;

* Dedicated to the late Prof. Dr. R. E. Woodson Jr. of St. Louis, Missouri, who with great success explored the systematics of Apocynaceae.

bark soft, brown, exudate whitish-cream, clear, sticky but free flowing. Flowers white. Fruits brown, 0.5 in. across, long; two joined, about 5 in. Fl. 19.xi.63–Z. Lipangeto (holotype of the genus, in BSIP).

Shortland: BSIP 5774, SE at Hisie R., valley bottom, well drained primary forest. Tree, H. 40 ft., G. 3 ft. Bole straight, buttresses thick, spreading, to 2 ft. Bark surface dark brown, smooth. Slash: wood hard, yellow, bark soft, brown and yellow. Exudate opaque, sticky and free flowing. Flowers white. Fruits brown, 11 in long. Fr. 30.iv.64, Whitmore's Collectors.

Santa Ysabel: BSIP 2632, Allardyce Hbr, coastal swamp. Small tree, fruits long and brown. Fr. 11.vii.63, J. Sore, W. Masu'u, Z. Lipangeto.

This genus, belonging to the tribe *Echitideae* with anthers enclosed and sticking to the stigma head, represents an Asiatic counterpart to the tropical-American (and west-African) genus *Malouetia*, which has similar fruits and also seeds without a hair tuft. The large cotyledons call in mind those of *Tabernaemontanoideae*.

B. *Alstonia* R. Brown

***Alstonia vitiensis* Seem. var. *whitmorei* Mgf.n.v.**

Arbor usque ad 15 m. alta. Ramuli glabri, teretes. Folia opposita, glabra; petiolus 2–6 mm. longus, basi intus glandulosus; lamina tenuiter chartacea, lanceolato-elliptica, apice acuta, basi cuneata et in petiolum decurrens, 15–25 cm. longa, 5–11 cm. lata; nervi secundarii ad 16 in utroque latere, conspicui, obliqui, in ipsum marginem decurrentes. Inflorescentiae foliis vix breviores, glabrae, multiflorae, e bracteis minimis triangularibus axis principalis ramuli oppositi, subpleiochasiales oriundi, bracteis minimis scariosis ornati; bracteolae duae minimae scariosae calyci approximatae. Calycis lobi glabri, obtusi, orbiculari-ovati, eglandulosi, 1.5 mm. longi et lati. Corollae albae, odoratissimae, tubus claviformis, 3 mm. longus, infra faucem constrictum 1 mm. latus, extus glaber, intus infra stamina et in ipsa fauce longe pilosus; lobi lineares, obtusi, 6 mm. longi, 1 mm. lati, glabri, dextrorsum tegentes, in basi tegente subauriculati. Antherae breviter ovoideae, infra faucem subsessiles, 1 mm. longae. Stigma conicum, verrucosum, anulo basali angusto circumdatum, antheras attingens. Stylus 1 mm. longus. Ovarium apocarpum, cylindraceum, glabrum, 1 mm. altum, 0.6 mm. latum, multiovulatum; discus nullus. Mericarpia (immatura) ad 40 cm. longa, 3 mm. lata, laevia, glabra, teretia.

SOLOMONS: Guadalcanal: BSIP 605, Gold Ridge, alt. 2000 ft., ridge forest. Several-stemmed small tree, 30 ft. tall. Flowers white, highly fragrant. — Fl. 13.x.1962 — T. C. Whitmore, (holotype of the variety, in BSIP).

Santa Ysabel: BSIP 2463, nr. Maringe Lagoon, long western ridge of Mt. Sasari, ridge forest, alt. 2000 ft. Small tree, H. 30 ft., G. 9 in. Fruits green, unripe, leaves bright green. Fr.28.x.1963 T. C. Whitmore. BSIP 2433, Maringe Lagoon, Molau village, alt. 2200 ft., secondary forest; tree, H. 40 ft., G. 1 ft. Crown conical, tiered, the old fruits pendent from every tier; bole smooth, bark grey; slash: wood yellow, bark coarsely granular; vivid sulphureous yellow at cambium, paler outwards, with fawn flecks; no exudate, but cut twigs with sticky white exudate; flowers yellow in bud, with white lobes when open. — Fl.27.x.1963, T. C. Whitmore.

S. E. Choiseul: BSIP 2985, ultrabasic outcrop across bay from Ruruvai, sea level, inside edge of mangrove. Tree, H. 15 ft., flowers white, scented; white exudate from twigs. Fl.27.ii.1964, T. C. Whitmore. BSIP 4015, Easternmost Choiseul, ultrabasic hill on coast opposite Bembalama Island. Forest with much Casuarina and thick leaf litter layer. Tree, G. 1 ft. Flowers white. Fl.3.iii.1964, T. C. Whitmore.

SANTA CRUZ: Vanikoro: BSIP 1653, E. side Saboe Bay, ridge forest, alt. c. 500 ft. Tree, H. 50 ft., bole smooth, fawn; flowers yellow-green in bud; cut twigs exuding white sap. Fl.1.iv.1963, T. C. Whitmore. BSIP 1630, S. coast at Emwa, ridge forest, alt. c. 1000 ft., soil deep, red sticky clay under a mull-type humus layer. Small tree to 20 ft., flowers white, fruits green. Fl.8.iv.1963, T. C. Whitmore.

This Solomon's taxon belongs to the polymorphous Polynesian group of *A. plumosa* Lab., mentioned by Monachino in his monograph (Pac. Sc. 3, 143, 1949, point 4, second paragraph), and especially to his "dubious form in the Solomon Islands" (171), which (172) "in general appearance is markedly like" his var. *novo-ebudica* from the New Hebrides, but also "to the glabrous-leaved series from Fiji".

C. Carruthersia Seemann

Carruthersia mollis Mgf.n.sp.

Frutex alte scandens. Ramuli juveniles teretes, setis brevibus patulis molliter fusco-velutini. Folia chartacea, supra laxe hirsuta, subtus molliter fusco-velutina, in marginibus ciliata; petiolus 1-1.5 cm. longus; lamina firme chartacea, ovata, apice acuminata, basi cordata, ad 9 cm. longa, 5 cm. lata; nervi secundarii utrinsecus 6-8. Inflorescentiae axillares, trichasiales, molliter fusco-velutinas 5 cm. longae et latae, bracteis et bracteolis minimis, supra glabris. subtus velutinae ornatae. Pedicelli 6-8 mm. longi. Calycis lobi late ovati, 1 mm. alti et lati, extus breviter setosi, intus glabri et multiglandulosi. Corollae tubus ruber, 9 mm. longus, 2 mm. latus, supra calycem paulo ampliatus et inde usque ad faucem extus breviter setosus, intus longiuscule pilosus; faux pilis longioribus clausus; lobi rosei, dextrorsum tegentes, valde obliqui.

securiformes, pars erecta 7 mm. longa a basi angustiore ad 5 mm. dilatata, pars lateralis obtusa, 3 mm. lata, 3 mm. longa (cum apice partis erectae, ex qua oritur, 8 mm. longa). Antherae oblongae, breviter acuminatae, caudis basalibus incurvis, glabrae, 15 mm. longae, 0.5 mm. latae, filamentis 0.5 mm. longis, glabris 1 mm. supra basin tubi insertae. Ovarium glabrum, apocarpum, carpella subglobosa, 0.3 mm. alta, cum 2 squamis disci obtusis alternantia. Ovula pauca, biseriata. Stylus 1.5 mm. longus, capite stigmatico 1.5 mm. longo, fusiformi-incrassato coronatus. Fructus desunt.

SOLOMONS: Santa Ysabel: BSIP 2749, Bogotu, forest on gentle sloping ridge-side west of Parega village; deep, sticky, orang clay soil overlying ultrabasic rock. Woody climber, flowering at 50 ft., corolla tube red, limbs pink. Fl.6.xi.63 T. C. Whitmore, (holotype in BSIP).

In most characters corresponding well to *C. brassii* Merr. et Perry, and to *C. latifolia* Gillespie, but both are essentially glabrous, and have an outside glabrous corolla tube; their filaments are hairy; they differ slightly too in the measurements of leaves, flowers and flower parts.

D. *Kentrochrosia* Ltb. et K. Schum. and *Kopsia* Blume

The vegetative parts and flowers of *Kopsia flavida* Bl., the fruit of which is unknown, completely agree with those of *Kentrochrosia monocarpa* K. Schum. (cf. Markgraf in Bot. Jahrb. 61, 196, 1928). All the years over no indigenous *Kopsia* has been discovered in New Guinea and surrounding countries. Thus it becomes obvious that both names refer to the same species. As moreover another species with a minor lateral excrescence of the fruit has now been found in Borneo (*Kopsia lapidilectu* v.d. Slesesen in Blumea 10, 137, 1960), the genus *Kentrochrosia* should best be united with *Kopsia*.

E. *Ochrosia* Jussieu

Ochrosia sciadophylla Mg.f.n.sp.

Arbor 9–12 m. alta. Ramuli glabri, angulosi. Folia ternatim vel quaternatim verticillata; petiolus 2–4 cm. longus, intra basin multiglandulosus; lamina firme chartacea, glabra, oblongo-elliptica, apice obtuse acuminata, in petiolum cuneato-decurrens, 12–25 cm. longa, 3.5–6 cm. lata; nervi secundarii arcuati, sed e costa rectangulariter orti, 18–25 paria, paucis abbreviatis tenuioribus interiectis. Inflorescentiae glabrae, axillares, pauciflorae; pedunculus communis 2–3 cm. longus, erectus, pedunculi ultimi 2–5 mm. longi floribus subsessilibus glomeratis coronati; bracteae et bracteolae triangulares minimae. Lobi calycis ovati, obtusi, glaberrimi, 1.5 mm. longi, 1 mm. lati, intus eglandulosi. Corollae albae, glabrae, gracilis tubus 2 mm. longus, 1 mm. latus, etiam

intus glaber, lobi glabri, oblongi, 5 mm. longi, 1 mm. lati, sinistrorsum tegentes, obtusi. Antherae infra faucem sessiles, glabrae, breviter ovatae, 1 mm. longae. Stigma glabrum, cylindrico-conicum, collo basali cinctum, antheras vix attingens. Ovarium apocarpum, biloculare, ovoideum, in utroque loculo biovulatum. Mericarpia viridia, oblique ovata, 5 cm. longa, 2.5 cm. crassa, in rostrum apicale 1 cm. longum recurvum attenuata exocarpium chartaceum, nitidulum, mesocarpium suberosum, vix evolutum, endocarpium lignosum, compactum, nonnisi prope marginem in costulas latiores et inpaucos fibros tenues dissolutum, intus laeve et nitidulum. Pars basalis laterum carpelli ad 15 mm. longitudinis et 7 mm. latitudinis concreta; dissepimentum coriaceum, in utroque eius latere unum semen valde applanatum, oblique ovatum, 2 cm. longum, 1.5 cm. latum, prope basin ad 1 cm. erosum, ala 3 mm. lata cinctum gerens.

SOLOMONS: New Georgia: BSIP 3700, NW at Vaimbu River; well drained primary forest on hill side, alt. 350 ft. Tree, H. 80 ft., G. 4 ft.; bole straight, bark surface light brown, smooth; slash: wood hard, yellow, bark hard, yellow; white, opaque, sticky, free-flowing exudate; flowers white, scented; fruits green. Fl. and fr. 19.iii.1964, Whitmore's Collectors (holotype in BSIP). BSIP 3182, NW at Viambu River, hillside 400 ft., well drained primary forest. Tree, H. 40 ft., G. 3 ft.; bole straight, buttresses absent, bark surface dark brown, fissured; slash: wood hard, light brown, bark hard, fawn inside, brown outside; fruits green, Fr.30.iv.1964, Cowmeadow's Collectors. BSIP 3734, N. coast near Hovoro, ridge top, 564 ft., well drained primary forest. Tree, H. 38 ft., G. 2 ft.; buttresses thick, steep, spreading, bark surface dark brown, scaly; slash: wood soft, yellow, bark soft, flecked yellow; flowers yellow, scented, fruits green. Fr.21.v.1964, Whitmore's Collectors. BSIP 2529, Viru R., Viru Hbr., flat land, volcanic rock, alt. 200 ft., Camptosperma forest, red clay loam. Small understory pole; G. 2 ft. 13.viii.63, A. W. Cowmeadow & R. Teona. BSIP 1950, Roviana Lagoon, nr. Nusahope village, small stream in lowland forest. Tree, H. 30 ft., open, deep crown, flowers white, fruits green, Fl. & fr.19.ix.1963, T. C. Whitmore.

This taxon belongs to a small group of distantly-nerved species with cuneate leaf base, like *O. ficifolia* (Sp. Moore) Mgf. in New Guinea. It is distinguished by its long-petioled and long-bladed, many-nerved leaves, short inflorescences, by a thick endcarp, containing only one seed at either side of the false septum.

F. *Pagiantha* Markgraf*Pagiantha koroana* Mgf. var. *salomonensis* Mgf.n.v.

Arbor ad 18 m. alta, radicibus tabularibus instructa, cortice fusca, squamosa et verrucosa oblecta. Ramuli crassiusculi, glabri, subquadranguli. Folia opposita, coriacea, glabra, petiolus 5–10 mm. longus, in axilla stipula una cyathiformi 5 mm. longa praeditus; lamina elliptica, obtusa, usque ad 25 cm. longa, 16 cm. lata, nervi secundarii arcuati, 10–12 in utroque latere. Inflorescentiae axillares, trichasiales, pedunculi crassiusculi, angulosi, bractaeae et bracteolae triangulares, 3 mm. longae, semiamplectentes, pedicelli 5 mm. longi, crassiusculi. Lobi calycis orbiculares, glabri, minute ciliati intus pluriglandulosi, 6 mm. longi. Corollae albae, odoratae, tubus crassiusculus, 20 mm. longus, 5 mm. latus, glaber; lobi in alabastrum globosum, 8 mm. latum inflexi, glabri, sinistrorsum tegentes, oblique ovati, in basi tegente auriculati, 10 mm. longi, 7 mm. lati. Stamina in medio tubo subsessilia, antherae oblongae, 4 mm. longae, 1 mm. latae, apice breviter apiculatae. Caput stigmaticum crassum, verrucosum, oblongum, 2 mm. longum, 1 mm. latum, apice breviter biapiculatum, antheras non attingens. Stylus crassus, brevissimus, 0.5 mm. longus. Ovarium apocarpum, biloculare, 2 mm. altum, 2.5 mm. latum, glabrum, carnosum, angulosum, multiovulatum. Fructus apocarpi; mericarpi (plerumque unum solum maturans) subglobosa, breviter acuminata, recurvata, fusca, verrucosa, carnosissima, usque ad 15 cm. crassa, pulpa rubra impleta. Semina numerosa, oblonga, longitudinaliter unisulcata et in superficie multirimosa, ad 12 mm. longa et 6 mm. lata. Testa tenuis, albumen corneum. Embryo rectus, longitudinalis, sulco oppositus et in latere sulci concavus, radícula 5 mm. longa, 1 mm. crassa, cotyledones triangulari-ovati, 4 mm. longi, 3 mm. lati.

SOLOMONS: New Georgia: BSIP 3195, NW at Hehebere R., near Hovoro, valley bottom, 300 ft. above sea level, well drained primary forest. Tree, H. 60 ft., G. 8 ft. Bole straight. Buttresses thick, steep to 7 ft. Bark surface light brown, scaly and warty. Slash: wood hard, light brown, bark soft and fawn. Exudate white, opaque, sticky in free-flowing drops. Flowers white, scented. Fruits brown, 3 × 1.5 in. ovoid. Fl. 4.v.64. A.W. Cowmeadow. (holotype of the variety, in BSIP). BSIP 3129, NW at Vaimbu R., well drained primary forest on hillside, alt. 320 ft. Tree, H. 60 ft., G. 3 ft. Bole straight. Bark surface light brown, fissured. Slash: wood hard, light brown, bark hard, fawn. White, opaque, sticky, free-flowing exudate. Flowers green in bud, unscented. Fl. 24.iii.64. A. W. Cowmeadow. Kolombangara S.W.: BSIP 1193, Tree, up to 40 ft., overall with widely spreading branches. Flowers white, sweetly scented. Fruits rarely paired, grey brown. Fl. 26.xi.62. Womersley and Whitmore.

Santa Ysabel: BSIP 4103, Bogotu Peninsula, near Koloajoa village. Disturbed forest. Tree, H. 30 ft. Flowers white. Fruits grey-green, paired. Young fl. and fr. 23.iii.64, T. C. Whitmore. BSIP 2183, N.W. coast, Bagi R., 1 mile S. of Allardyce Hbr. Low-lying, periodically swamped forest near shore. Tree, H. 60 ft., G. 5 ft. Crown rounded, dense with large leaves. Bole orange-fawn, coarsely rugose with large lenticels. Low, thick, rounded buttresses. Slash: wood fine grained, orange, bark granular, fawn. Copious slightly sticky white, milky latex. Fruits very curious, some paired, ovate to kidney-shaped, brown warty surface, to 7 in. long. Ultimately dehiscent longitudinally. Seeds in a central red mass which is probably floral tissue; the pericarp very very thick; persistent exuding latex. Fr. 15.x.63, T. C. Whitmore.

The genus *Pagiantha* is distributed from India to Polynesia, but in isolated species areas. (cf. Markgraf in Notizbl. Berl.-Dahl 12, 549, 1935 and Bull. Bish. Mus. 141, 129-130, 1936). This new variety of the Fijian *P. koroana* differs mainly by being larger in all vegetative parts, and by presenting elliptic leaves with rounded base instead of obovate ones. Moreover, the corolla lobes seem to remain shorter, and the stigma head does not reach the anthers. The fruit of the species is here described for the first time.

IX. Gnetaceae

By this collection, our knowledge of the genus *Gnetum* in the Solomon Islands has been considerably enhanced. As yet it was unknown that e.g. the climbing *Gnetum latifolium* Bl. occurred there at all. Now its presence is proved by numerous good samples. It is represented chiefly by the common f. *latifolium*, not by f. *brachypodium* Mgf. so frequent in the Philippine Islands, and once by var. *laxifrutescens* (Elm.) Mgf., whose area previously extended from the Philippine Islands to the Bismarck archipelago. In this Solomon Islands collection, there has been found also var. *latifolium* f. *longipes* Mgf., to which, however, no geographical value can be attributed, as it occurs here and there in the whole area of the species.

The numerous samples of the tree *Gnetum gnemon* L. offer some interesting features. The typical variety of this species, var. *gnemon*, centres in eastern Malesia, from Palawan, Sulu, Celebes and Sumba eastward, though it is often cultivated in other parts. At any rate, its area is accompanied by some low-growing and small-seeded varieties. Four varieties thrive in western Malesia, from Celebes through Borneo and the Malay Peninsula in to

Assam and Burma; one other, var. *silvestre* Parl. has the same range as var. *gnemon*, from the Philippine Islands and Celebes through the Moluccas and New Guinea to the Fiji Islands. It appears from Whitmore's collections that this variety hybridizes with var. *gnemon* in the Solomon Islands. Of course it may do so elsewhere, but previously we have never had enough material from a single region to make a comparison.

In order to distinguish the two varieties and the intermediate specimens, one can find out several graded characters: height of the plant, length of the fertile part of the inflorescences in anthesis, the same of female plants with ripe seeds, length of their internodes, size of ripe seeds, shape of ripe seeds, number of male flowers in one middle bracteate collar of male plants. The specimens of the present collection are arranged in a scheme according to these steps in Table 1 which shows as a first general result that var. *silvestre* seems to be the more frequent one; moreover it is often expressively called frequent by the collectors. As earlier collections have shown too, it proves to be the prevailing variety in the rain — forests east of New Guinea. None of the Solomons' specimens reaches the mean height of true var. *gnemon*. Even in those which come nearest to var. *gnemon*, the characters taken into consideration hold its lowermost level. The same predominance of var. *silvestre* appears also in the intermediate specimens; most of them incline more to var. *silvestre* than to var. *gnemon*. This trend may be understood in the easiest way by assuming that var. *silvestre*, prevailing in quantity, will prevail also in morphological characters over the interbreeding var. *gnemon*. This interpretation of the intermediates as being of hybrid origin, is favoured too by the fact that the respective characters appear in them in almost any combination. Only the lengths of the inflorescences show a certain parallelism to the lengths of their internodes. Of our scheme, the first three collections, BSIP 1875, 3942, 3448 may still be reckoned under true var. *gnemon*, and the last seven under var. *silvestre*, namely BSIP 2202, 5319, 2799, 4008, 3435, 5653, 3680.

All the specimens cited in these notes were examined on loan from the Forest Herbarium, Honiara (BSIP). Replicates are at K, L, LAE, SING and US; the last two sets are however incomplete.

TABLE 1

The two common *Gnetum gnemon* varieties in Solomons and their intermediates.
Hybridisation is suspected. See text

BSIP No.		average <i>v. gnemon</i>	1875	3942	3448	2989	5444	2519	1155	2708	5250	826	5635	4079	3061	1167	2202	5319	2799	4008	3435	5653	3680	average <i>v. silvestre</i>	BSIP No.	
sex		♂ & ♀	♂	♀	♀	♀	♀	♀	♀	♀	♀	♀	♀	♀	♀	♂	♂	♂	♂	♂	♂	♀	♀	♂ & ♀	sex	
stage		adult	open fl.	adult	unripe seeds	unripe seeds	adult	fl. & ripe seeds	unripe seeds	open fl.	ripe seeds	ripe seeds	ripe seeds	adult	unripe seeds	young	young	open fl.	young	adult	young	ripe seeds	fl.	adult	stage	
plant ht. m.		8-20	3	9	6	3	4.8	shrub	12	treelet	under 4.5	6	tree	treelet	tree	treelet	treelet	3	treelet	4.5	under 1.5	tree	7.5	8-12	plant ht. m.	
inflorescence lengths	in flower cm.	2-5	2	=	=	=	=	2	=	2.8	=	=	=	=	=	1.5	broken	1.7	1.5	1.2	1.5	=	2.5	♂ 1.5-2 ♀ 2-3	in flower cm.	inflorescence lengths
	with ripe seeds cm.	6-8	=	7-8	7	7	8	5	3	=	4	broken	4	4	2	=	=	=	=	=	=	4	=	2-5	with ripe seeds cm.	
	internodes cm.	♂ 1-2 ♀ 2-5	0.5	6-7	5-8	8-10	6-7	fl. 2 ripe 6	4-5	3-4	3-4	1-2	2-3	3	1-2	0.1	0	0.2	0	0	0.1	2-3	1-2	fl. 0-1 ripe 2	internodes mm.	
seed size mm.		20-25 ×10-15	=	25×15	20×11	14×8	16×10	17×8	15×12	=	15×8	20×10	15×11	15×10	15×10	=	=	=	=	=	=	15×11	=	8-12 ×8	seed size mm.	
seed shape		blunt	=	blunt	blunt	round with tip	pointed	pointed	pointed	=	pointed	pointed	round with tip	pointed	round with tip	=	=	=	=	=	=	round with tip	round	pointed	seed shape	
approx. no. ♂ fl.		80	60	=	=	=	=	=	=	=	=	=	=	=	=	60	50	50	30	30	25	=	=	40	approx. no. ♂ fl.	
conclusion			true <i>v. gnemon</i>			intermediate between <i>v. gnemon</i> and <i>v. silvestre</i>										true <i>v. silvestre</i>						conclusion				

